

CLAIMS

Please cancel claims 4-8 without prejudice. Please amend claim 1 and add new claims 10-21. No new matter has been added.

1. (Currently Amended) An apparatus, comprising:

an array of carbon nanotube heads, each of the carbon nanotube heads including:

a carbon nanotube,

a housing surrounding the carbon nanotube,

an acceleration electrode mounted at an end of the housing,

a deflection electrode interposed between the acceleration electrode and the carbon nanotube,

a window sealing the end of the housing,

and

a detection electrode mounted on a surface of the window, the surface exterior to the housing;

and

a substrate upon which the array of carbon nanotube heads are mounted.

2. (Original) The apparatus of claim 1, wherein:

the array of carbon nanotube heads includes a set of read/write heads.

3. (Original) The apparatus of claim 1, wherein:

the array of carbon nanotube heads includes independent controls for each carbon nanotube head.

4-9. (Cancelled)

10. (New) The apparatus of claim 1, further comprising:

A gating electrode interposed between the deflection electrode and the carbon nanotube.

11. (New) The apparatus of claim 10, further comprising:

A focus electrode interposed between the deflection electrode and the gating electrode.

12. (New) The apparatus of claim 1, wherein:

The housing is a vacuum housing.

13. (New) The apparatus of claim 1, wherein:

The window is a boron nitride window.

14. (New) The apparatus of claim 1, wherein:

The substrate is mounted on a base, the housing of each carbon nanotube is attached to the base.

15. (New) The apparatus of claim 1, wherein:

Carbon nanotubes of the array of carbon nanotubes each have individual housings associated therewith.

16. (New) The apparatus of claim 1, wherein:

Carbon nanotubes of the array of carbon nanotubes share a single housing among all carbon nanotubes of the array of carbon nanotubes.

17. (New) An apparatus, comprising:

an array of carbon nanotube heads, each of the carbon nanotube heads including:

a carbon nanotube,

an evacuated housing surrounding the carbon nanotube,

an acceleration electrode mounted at an end of the housing,

a deflection electrode interposed between the acceleration electrode and the carbon nanotube,

a boron nitride window sealing the end of the housing,

a detection electrode mounted on a surface of the window, the surface exterior to the housing

a gating electrode interposed between the deflection electrode and the carbon nanotube,

and

a focus electrode interposed between the deflection electrode and the gating electrode;

and

a substrate upon which the array of carbon nanotube heads are mounted.

18. (New) An apparatus, comprising:

an array of carbon nanotube heads, each of the carbon nanotube heads including:

a carbon nanotube,

a housing surrounding the carbon nanotube,

an acceleration electrode mounted at an end of the housing,

a deflection electrode interposed between the acceleration electrode and the carbon nanotube,

a window sealing the end of the housing,

a detection electrode mounted on a surface of the window, the surface exterior to the housing

a gating electrode interposed between the deflection electrode and the carbon nanotube,

and

a focus electrode interposed between the deflection electrode and the gating electrode;

and

a substrate upon which the array of carbon nanotube heads are mounted.

19. (New) The apparatus of claim 18, wherein:

The housing is a vacuum housing.

20. (New) The apparatus of claim 18, wherein:

The window is a boron nitride window.

21. (New) The apparatus of claim 18, wherein:

The substrate is mounted on a base, the housing of each carbon nanotube is attached to the base.